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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/784,637 | 02/15/2001 | Heinz-Jurgen Bachelier | ESN-38 | 5572 |

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06/05/2002

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Cincinnati, OH 45202

EXAMINER

COOLEY, CHARLES E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1723

DATE MAILED: 06/05/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/784,637

Applicant(s)
Bachelier et al.

Examiner
Charles Cooley

Art Unit
1723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 Feb 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 Feb 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3, 7
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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OFFICE ACTION

1. This application has been assigned to Technology Center 1700, Art Unit 1723 and the following will apply for this application:

a. Please direct all written correspondence with the correct application serial number for this application to Art Unit 1723.

b. Telephone inquiries regarding this application should be directed to the Technology Center 1700 receptionist at ☎(703) 308-0651 or to the Examiner at ☎(703) 308-0112. Official facsimile correspondence filed before a final office action should be transmitted to ☎(703) 872-9310. Official facsimile correspondence which responds to a final office action should be transmitted to ☎(703) 872-9311.

c. Inquiries regarding application status, matching responses with applications, patent term questions, locating and retrieval of applications, incomplete office actions, requests for copies of office actions and/or references, requests to remail office actions, small/large entity status, or other administrative inquiries should be directed to the **Technology Center 1700 Customer Service Center** at ☎(703) 306-5665.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

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Information Disclosure Statement

3. Note the attached PTO-1449 forms submitted with the Information Disclosure Statements filed 15 MAR 2001 and 18 MAR 2002.

Drawings

4. The drawings are objected to under 37 CFR § 1.83(a) since the drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the features canceled from the claims. No new matter should be entered.

a. the subject matter of claim 12.

5. Applicant should verify that (1) all reference characters in the drawings are described in the detailed description portion of the specification and (2) all reference characters mentioned in the specification are included in the appropriate drawing Figure(s) as required by 37 CFR 1.84(p)(5).

6. Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must include a print or pen-and-ink sketch showing changes in *red ink* in accordance with MPEP § 608.02(v).

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or

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pen-and-ink sketch with proposed corrections shown in red ink is required in response to this Office Action, and *may not be deferred*.

Specification

7. The substitute specification has been entered.
8. The abstract is acceptable.
9. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (MPEP 606.01).

Claim Objections

10. The claims are objected to because they lack a proper introduction. The present Office practice is to insist that each claim must be the object of a sentence starting with "I (or we) claim", "The invention claimed is" (or the equivalent). MPEP § 608.01(m).

Claim Rejections - 35 U.S.C. § 112, second paragraph

11. Claims 1-14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1, line 7: "the liquid substance" lacks antecedent basis.

Claim 9, line 3: "the blades" lacks antecedent basis.

Claim 10, line 2: which one of the previously recited drive motors is "the drive motor" referring to?

Claim 12, line 2: "the liquid material" lacks antecedent basis.

12. Each pending claim should be thoroughly reviewed such that these and any other informalities are corrected so the claims may particularly point out and distinctly claim the subject matter which applicant regards as the invention, as required by 35 U.S.C. § 112, second paragraph.

Claim Rejections - 35 U.S.C. § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

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(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

14. Claims 1-5, 10, 11, and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by GB 2047104.

GB 2047104 discloses a rotor 29; housing 40; drive device in the form of motors 25, 26; rotatable element 30 being an impeller or rotor with pump buckets 33; coaxial drive shafts 27, 28 coupled to the motors and the rotor 29 and rotatable element 30.

15. Claims 1-6, 8, 10, 11, 13, and 14 are rejected under 35 U.S.C. § 102(e) as being anticipated by Muntener (USP 6,227,698).

Muntener (USP 6,227,698) discloses in Fig. 3 a rotor 221; housing 1; rotatable element 204 being an impeller or rotor with pump buckets 8; coaxial drive shafts 23, 105 coupled to the motors and the rotor 221 and rotatable element 204; drive device 401 which can drive the rotor and rotatable element at a desired speed and direction and which may constitute two separate motors connected to the shafts 23 and 105 with speed controls (Col. 9, lines 39-50); the shaft 105 being hollow; shaft seal (above 402) in Fig. 3; fixed stator interleavings 7 on the housing 1.

16. Claims 1-7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Herfeld (USP 4,918,665).

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Herfeld (USP 4,918,665) discloses a rotor 12; housing 3; rotatable element 11 being an impeller or rotor with pump buckets 11a; coaxial drive shafts 19, 21 coupled to a motor 14 and the rotor 12 and rotatable element 11; the shaft 19 being hollow; the inner drive shaft 21 supported in the outer drive shaft 19 by roller bearings 22 and the outer shaft 19 being supported in a second housing 4 by bearings 20.

17. Claims 1-7, 9-11, and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Pillon et al. (USP 4,883,363).

Pillon et al. (USP 4,883,363) discloses a rotor 4; housing 27; rotatable element 12 being an impeller or rotor with pump buckets 14; drive device in the form of motors 6, 17; coaxial drive shafts 1, 2 coupled to the motors and the rotor 4 and rotatable element 12; the shaft 2 being hollow; the inner drive shaft 1 supported in the outer drive shaft 2 by roller bearings (Fig. 1) and the outer shaft 2 being supported in a second housing 28 by bearings (Fig. 1); the rotor and rotatable element having base plates 4, 12 from which blades 5, 14 extend; the base plates being coupled to the shafts 1, 2 which are oriented in a vertical direction; the drive shafts being driven by belts 7, 18.

* * *

With regard to the above rejections and although the patent to at least Muntener teaches as such, the operational and functional language of the claims (e.g., the language of claim 2, claim 10, lines 3-6, and claim 11) has been considered but fails to

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impart or invoke any further structure or means (per 35 USC 112, sixth paragraph and MPEP 2181) to the pending apparatus claims which defines over the applied prior art. Consequently, since all of the claimed structure is met by the applied prior art, the rejections under 35 USC 102 are deemed proper.

Claim Rejections - 35 U.S.C. § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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20. Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Pillon et al. in view of Scheimann et al. (USP 5,253,937).

Pillon et al. (USP 4,883,363) discloses axial inlet opening 21; container 23; and housing 27 with an outlet but does not disclose the return lines and valves. Scheimann et al. (USP 5,253,937) discloses a device having a container housing 12 with an outlet opening 44. Multiple return lines 34 communicate with the outlet opening 44 for returning material back to the container housing 12 under the control of valves 40. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the device of Pillon et al. (USP 4,883,363) with return lines and valves as disclosed by Scheimann et al. (USP 5,253,937) for the purpose of enabling the concentration of substances in the mixture to be adjusted as desired (Col. 5, lines 1-5).

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

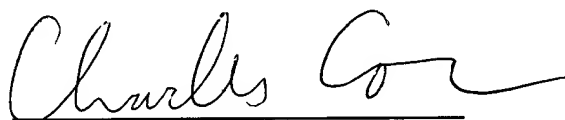
The cited prior art discloses devices with coaxial rotors. Collins and Larkins et al. disclose shaft seals.

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22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Charles Cooley whose telephone number is ☎ (703) 308-0112.

23. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is ☎ (703) 308-0651.

Dated: 30 May 2002

A handwritten signature in cursive script, appearing to read "Charles Cooley", written over a horizontal line.

Charles Cooley
Primary Examiner
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